

REMARKS/ARGUMENTS

Claims 23-39 were pending, all of which were rejected. Applicant requests reconsideration. Independent claims 23 and 33 have been amended. No new matter is added.

Interview Summary

The Examiner is thanked for his time and consideration during the Interview of June 24, 2008, during which the scope of the claims and the cited references were discussed. The present Response to Office Action reflects the substance of the discussion, in particular, the amendment of the independent claims to reflect that the "local process variation" is unintentional.

Claim Rejections – 35 U.S.C. §102

Claims 23, 24, and 33 were rejected under 35 U.S.C. §102(e) as being anticipated by Nikoonahad et al. (7,009,704) ("Nikoonahad"). Claims 33 and 34 were rejected under 35 U.S.C. §102(e) as being anticipated by Raymond (6,856,408) ("Raymond"). Claims 23-33, 35-39 were rejected under 35 U.S.C. §102(e) as being anticipated by Mieher et al. (2004/0169861) ("Mieher"). Claims 23 and 24 were rejected under 35 U.S.C. §102(e) as being anticipated by Stirton (6,458,605) ("Stirton"). Reconsideration is respectfully requested.

Both amended independent claims 23 and 33 recite "determining a measurement of an overlay error ... and correcting the determined measurement of the overlay error for effects of an unintentional local process variation created during processing of the overlay pattern". As discussed with the Examiner, the offset between the "top diffraction grating" and "bottom diffraction grating" is an intentional design, whereas the local process variation is unintentional and produces a difference between two "locations" of the overlay pattern. The amendment to independent claims 23 and 33 reflect that the local process variation is unintentional. Support for the amendment may be found, e.g., at Figs. 4 and 6, and accompanying text, and thus, no new matter is added.

Applicant submits that a local process variation is inherently unintentional as a process variation that produces a difference in "at least two measurement locations in the overlay pattern" is undesirable. Thus, the amendments to claims 23 and 33 simply make explicit what was already implicit in the claim. Applicant is not conceding that the claims as they stood

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prior to amendment are not patentable over the art cited by the Examiner. The amendments to the claims are only for facilitating expeditious prosecution and allowance of the claims.

As discussed in the previous response, the recited "correcting the determined measurement of the overlay error" is different than using the determined overlay error in a feed back loop to correct the processing of wafers as disclosed in Nikoonahad and Stirton. "Correcting the determined measurement of the overlay error" is directed at improving the measurement of the overlay error, whereas using the overlay error measurement in a feed back loop during processing is not correcting the measurement but is attempting to reduce or eliminate overlay errors during processing.

Additionally, the claim recites "determining a measurement of an overlay error ... and correcting the determined measurement of the overlay error", i.e., the same overlay error measurement that was determined is being corrected. When an overlay error measurement is used to control subsequent processing of wafers, the processing error that is being corrected is not the "determined measurement".

Moreover, the recited overlay pattern includes "a plurality of measurement locations, each measurement location includes a bottom diffraction grating and a top diffracting grating that overlies the bottom diffraction grating". Thus, an interpretation that the top and bottom layers in an overlay pattern are equivalent to the recited "locations" is improper, as each layer does not include "a bottom diffraction grating and a top diffracting grating that overlies the bottom diffraction grating" as recited in the claims.

Applicant submits that none of the references alone or in combination disclose the claimed features. Thus, Applicants respectfully submit that claims 23 and 33 are patentable over Nikoonahad, Raymond, Mieher and Stirton. Moreover, dependent claims 24-32 and claims 34-39 depend from claims 23 and 33, respectively, and are therefore patentable for at least the same reasons. Reconsideration and withdrawal of this rejection is respectfully requested.

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For the above reasons, Applicants respectfully request allowance of all pending claims. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 378-7777 ext 112.

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office to the fax number 571-273-8300 on the below date.

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Respectfully submitted,

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